

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A process for continuous production of cumene hydroperoxide comprising liquid phase oxidation of cumene in a reactor in the presence of an oxygen-containing gas under such conditions that an oxygen content of the total oxygen-containing gas volume fed into the liquid phase in the reactor is adjusted to not less than 22 mol% and not more than 50 mol%, and the cumene hydroperoxide production per unit volume of the reaction fluid in the reactor is not less than 22 kg/m³/hr.
2. (Original) A process according to claim 1, wherein the gas fed into the liquid phase in the reactor is a mixture of two or more gases.
3. (Currently Amended) A process according to claim 1 ~~or 2~~, wherein the gas fed into the liquid phase in the reactor is an oxygen enriched air which is a mixture of air with oxygen.
4. (Currently Amended) A process according to ~~any one of claims 1 to 3~~ claim 1, wherein an oxygen content of a spent gas of the reactor is not less than 2 mol% and not more than 10 mol%.

5. (Currently Amended) A process according to ~~any of claims 1 to 4~~ claim 1, wherein the oxygen-containing gas is fed into the reactor using a sparger whose aperture pitch is at least twice the aperture diameter.

6. (Original) A process for continuous production of cumene hydroperoxide comprising liquid phase oxidation of cumene in a reactor in the presence of an oxygen-containing gas under such conditions that an oxygen content of the total oxygen-containing gas volume fed into the liquid phase in the reactor is adjusted to not less than 22 mol% and not more than 50 mol%, and an oxygen content of a spent gas of the reactor is not less than 2 mol% and not more than 10 mol%.

7. (Original) A process according to claim 6, wherein the gas fed into the liquid phase in the reactor is a mixture of two or more gases.

8. (Currently Amended) A process according to claim ~~6 or 7~~, wherein the gas fed into the liquid phase in the reactor is an oxygen enriched air which is a mixture of air with oxygen.

9. (Currently Amended) A process according to ~~any one of claims 6 to 8~~ claim 6, wherein the oxygen-containing gas is fed into the reactor using a sparger whose aperture pitch is at least twice the aperture diameter.

10. (Original) A process for continuous production of cumene hydroperoxide comprising liquid phase oxidation in a reactor in the presence of an oxygen-containing gas under such conditions that an oxygen content of the total oxygen-containing gas volume fed into the liquid phase in the reactor is adjusted to not less than 22 mol% and not more than 50 mol%, and said oxygen-containing gas is fed into the reactor using a sparger whose aperture pitch is at least twice the aperture diameter.

11. (Original) A process according to claim 10, wherein the gas fed into the liquid phase in the reactor is a mixture of two or more gases.

12. (Currently Amended) A process according to claim 10 ~~or 11~~, wherein the gas fed into the liquid phase in the reactor is an oxygen enriched air which is a mixture of air with oxygen.

13. (Currently Amended) A process for production of phenol comprising acid decomposition of cumene hydroperoxide obtained ~~any one of claims 1, 6 or 10~~ claim 1.